

ABSTRACT

HIGH MOMENT FILMS WITH SUB-MONOLAYER NANOLAMINATIONS RETAINING MAGNETIC ANISOTROPY AFTER HARD AXIS ANNEALING

- 5 A film structure and deposition method for creating laminated Fe-M-N and Fe-M-O-N
films which retain good anisotropy after HA annealing are provided. Interleaved layers
of thin alumina laminations between the Fe-M-[O]-N layers and sublayer alumina
nanolaminations within the Fe-M-[O]-N layers create stable magnetic anisotropy in the
film. The magnetic anisotropy in the film survives HA annealing at hardbake resist
10 curing conditions in wafer manufacturing processes for GMR magnetic recording heads.